



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,068	04/26/2002	Alvin Ronlan	PVZ-007US	7796
959	7590	12/14/2004		
LAHIVE & COCKFIELD, LLP. 28 STATE STREET BOSTON, MA 02109			EXAMINER KNABLE, GEOFFREY L	
			ART UNIT 1733	PAPER NUMBER
DATE MAILED: 12/14/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/019,068	RONLAN, ALVIN	
	Examiner	Art Unit	
	Geoffrey L. Knable	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 13-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-33 and 35-42 is/are rejected.
- 7) ☒ Claim(s) 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 1733

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 34 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot refer to two different claim sets for different features (such a claim further is in essence a multiple dependent claim that does not refer back in the alternative only) – i.e. claim 34 refers to both claim 31 *and* one of the other claims. See MPEP § 608.01(n). Accordingly, claim 34 has not been further treated on the merits.
3. Claims 13-17, 22-31 and 35-42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kenney (US 4,304,281) alone or optionally (for the 103) further in view Bredbeck (US 5,522,559) as applied in the last office action.

New claim 42 is rejected for the same reasons already of record with respect to claim 17.

4. Claims 13-17, 21, 26-29, 39, 40/13 and 42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over GB 2,074,955 to Uniroyal as applied in the last office action.

New claim 42 is rejected for the same reasons already of record with respect to claim 17.

5. Claims 13-16, 21, 26 and 31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gunther (US 4,981,608) as applied in the last office action.

Art Unit: 1733

6. Claims 13-33 and 35-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ronlan (US 5,431,726) taken in view of Powell et al. (US 3,987,833), Clay (US 3,463,551), Fogal (US 5,073,217) and LeBlanc (US 6,128,952) as applied in the last office action.

New claim 42 is rejected for the same reasons already of record with respect to claim 17.

7. Applicant's arguments filed 9-23-2004 have been fully considered but they are not persuasive.

The 35 USC 112 rejections have been withdrawn in light of the amendments to the claims and the accompanying remarks.

The prior art rejections will however be maintained.

With respect to Kenney, it is argued that "Kenney's gelled composition does not flow under gravity or under the forces generated in the tire while running (see the abstract)." An complete examination of Kenney however reveals quite the contrary. In particular, note for example col. 3, lines 3-11 and Example 5 clearly indicate that this material does move under forces generated within the tire and it is thus submitted to be entirely reasonable to term this gelled material a visco-plastic gel. It is also argued that a visco-plastic gel would be unsuitable for puncture sealing as it would liquefy in the puncture. Whether or not this is accurate, it is not particularly relevant to Kenney, it being noted that in Kenney, it is the *particles* carried into the puncture that are effecting the sealing, not necessarily the gel – in fact the flow of the gel is critical to achieving the sealing – e.g. note col. 3, lines 24-31. It is also argued that just because it flows doesn't

Art Unit: 1733

mean it is visco-plastic. This argument has been considered but is unpersuasive. In fact, applicant's argument that it does not flow (note above quote using the abstract) shows the material has elastic properties while the clear indication that the gel can also flow under a certain applied stress shows that it has both properties. The argument that this material cannot be classified as visco-plastic is therefore unconvincing and unsupported by any convincing line of argument. Applicant's arguments with respect to Kenney are therefore unconvincing.

As to GB '955 to Uniroyal, it is argued that this is a visco-stable gel and would not therefore be visco-plastic. This argument has been carefully considered but is unpersuasive. First, it is noted that the reference gel is polyglycol/silicon oxide based – this being entirely consistent with the gels described as suitable – e.g. page 5, lines 13-24 of the present specification. Is it applicant's position that there is no shear force under which the gel of the reference would flow? This would have to be the case for it to not be suitably described as visco-elastic. It is submitted that almost all such typical gels will exhibit both elastic and flow behavior under suitable stress and applicant has not convincingly argued or shown otherwise. While different gel formulations would be expected to exhibit different behaviors, the claims simply broadly refer to a visco-plastic gel, not any particular or specific degree of visco-plastic properties and thus it is not considered that broadly defining or referring to a "visco-plastic gel" in any way defines over a gel as in the reference.

Further, while GB '955's gel may be relatively stable, it is still a gel and it seems highly unlikely that it would not flow under at least some applied stress, it again being

Art Unit: 1733

considered reasonable to term a glycol/silica based gel to be broadly visco-elastic absent some compelling and convincing argument to the contrary. A truly stable elastic material would be a cured rubber – certainly a gel is not equivalent to a cured rubber.

With respect to Gunther, it is argued that this is not a technological field related to the presently claimed invention. The noted claims are however simply a composition, not a, for example, method for balancing and thus any reference relating to a gelled material is related to the claimed invention. The argument concerning the make-up of the particles are also noted. Regardless of their make-up, however, the reference clearly describes them as a solid particulate material (e.g. claims 7 and 10 in the patent) – the claims require nothing more than this.

With respect to the rejection using Ronlan as primary reference, it is argued that Powell does not describe the particles as moving while it is argued that “Clay does not disclose a gel that incorporates a weighted material that is intended or indeed able to move around during the lifetime of the tire in response to changes in the balance of the wheel”. These arguments have been carefully considered but are unpersuasive. While it is agreed that Powell does not describe or envision particle rebalancing, it still provides some evidence of an understanding of the artisan that the effectiveness of an applied semi-liquid tire balancing material can be enhanced by including heavy particles therein, this also reducing the volumes required for balancing. This teaching would have been reasonably expected to apply for any applied semi-liquid balancing material. Further, with respect to Clay, contrary to applicant’s argument, Clay *expressly* describes that the particulate material flows to rebalance – e.g. col. 5, lines 74+.

With respect to the other secondary references, it is again noted that with respect to the size of the particles, it would have been obvious for the artisan to determine an appropriate size through routine optimization based upon the necessary requirement that the material appropriately balance the tire, it further being obvious to look to analogous particle balancing systems that are known to be suitable and effective in this art to provide general guidance in this regard.


8. Applicant's amendment necessitated the new ground(s) of rejection<sup>(new claim 42)</sup> presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Geoffrey L. Knable  
Primary Examiner  
Art Unit 1733

G. Knable  
December 11, 2004